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Date: February 8, 2007

To: Forest Supervisors: Eldorado, Inyo, Lassen, Plumas, Modoc, Sierra, Stanislaus, Sequoia and Tahoe National Forests and the Lake Tahoe Basin Management Unit

To: Park Superintendents, Sequoia, Kings Canyon and Yosemite National Parks

Subject: Douglas-fir Tussock Moth Pheromone Detection Survey 2006 Report (Report # NE07-02).

Enclosed are the results of the 2006 cooperative Douglas-fir tussock moth (DFTM) pheromone detection survey (Table 1). During 2006 traps were installed in 164 plots (5 traps/plot). There were 132 (80%) plots with an average of <25 males per trap and 32 plots (20%) that averaged 25 or more moths per trap. Only 11% percent of the plots averaged >25 males moths per trap in 2005 indicating an upward trend in overall trap counts in 2006. Plots that averaged >25 moths per trap for 2006 were located on the following Ranger Districts: Placerville (Eldorado NF), Almanor (Lassen NF), Big Valley (Modoc NF), Mt. Hough (Plumas NF), Minarets (Sierra NF) and Calaveras and Summit (Stanislaus NF) and the Yuba River (Tahoe NF). In addition to these plots monitored on National Forests, five plots exceeded an average of 25 moths/trap on lands of other ownership. Two of these plots were in Yosemite National Park and the remaining three were on private land monitored by CDF. (2 plots in Shasta County and 1 plot in Modoc County).

Increases and declines in trap counts are very common with DFTM populations. Based on the results of the 2006 trap monitoring, there may be some increases in activity in 2007 in some locations. During the field season of this year Forest Health Protection staff will monitor other life stages in the areas where DFTM activity exceeded an average of 25 males/trap and/or where notable larval activity occurred. Land managers will be notified of the results of the additional monitoring. Field going personnel are urged to continue to check for evidence of feeding and defoliation on white fir this coming summer and fall and report any findings to their Forest Health Protection Shared Service Area office.

During 2006, defoliation from Douglas-fir tussock moth was detected by aerial surveys in Yosemite National Park and on the Sierra and Stanislaus National Forests on over 20,605 acres; much higher than that observed in 2005 (12,711 acres). The Sierra NF had 10,005 acres defoliated, the Yosemite NP had 7,157 acres defoliated and the Stanislaus NF recorded 2,275 acres defoliated by DFTM. Whole tree mortality may be observed in the defoliated areas however top kill may be more common (about 25%). No DFTM egg masses were found during preliminary surveys (used to predict populations trends) conducted in the fall of 2006 indicating that the DFTM populations in these areas appear to be collapsing.

During 2006 newly defoliated areas were detected in a few locations. There were about 40 acres of white fir defoliated on the Eldorado NF near Panther Creek. DFTM feeding on white fir and Douglas-fir was also detected further north on the Shasta-Trinity NF (1,783 acres defoliated) and

on private land near Burney, CA (57 acres defoliated). Egg mass counts in this northern DFTM outbreak area indicate that some noticeable defoliation should be expected again in 2007.

Sufficient trapping materials have been ordered for the detection survey plots for 2007. They will be distributed to cooperators in June or July of this year. Please direct any questions and/or observations of feeding or defoliation to Danny Cluck (530-252-6431) or Beverly Bulaon at (209-532-3671). Updates on population monitoring will be distributed to land managers as needed. FHP appreciates the continued cooperation from all agencies in this ongoing west-wide survey effort.

/s/ ***Sheri Lee Smith***
Sheri Lee Smith
Regional Entomologist
Forest Health Protection

cc: Steve Jones, CDF&FP, Sacramento
Don Owen, CDF&FP, Redding
Don Dockery, BLM, Susanville
Peter Hall, BLM, Alturas
FHP – Regional Office, Shasta – Trinity NF & Stanislaus NF

Table 1. Number of Douglas-fir tussock moth pheromone detection survey plots by trap catch for 1995-2006 for California.

Year	Total # of Plots	NUMBER OF PLOTS WITH AN AVERAGE MOTH CATCH PER TRAP OF:														
		0<10	10<20	20<25	25<30	30<35	35<40	40<45	45<50	50<55	55<60	60<65	65<70	70<75	75+
1995	158	77	35	13	16	7	7	3	0	0	0	0	0	0	0
	100%	49%	22%	8%	10%	4.5%	4.5%	2%							
1996	149	33	26	16	8	7	12	9	5	8	6	8	5	1	5
	100%	22%	17%	11%	6%	4%	8%	6%	3%	6%	4%	6%	3%	1%	3%
1997	142	88	27	10	9	4	3	0	0	1	0	0	0	0	0
	100%	62%	19%	7%	6%	3%	2%			<1%					
1998	159	81	22	11	9	6	3	10	7	5	2	1	1	1	0
	100%	51%	14%	7%	6%	3%	2%	6%	4%	3%	<1%	<1%	<1%	<1%	
1999	159	126	20	5	3	2	2	0	0	0	1	0	0	0	0
	100%	79%	13%	3%	2%	1%	1%				1%				
2000	185	154	15	4	4	0	1	2	2	2	0	0	1	0	0
	100%	83%	8%	2%	2%		<1%	1%	1%	1%			<1%		
2001	183	95	57	13	10	6	0	1	1	0	0	0	0	0	0
	100%	52%	31%	7%	5%	3%		<1%	<1%						
2002	168	126	31	5	3	3	0	0	0	0	0	0	0	0	0
	100%	75%	18%	3%	2%	2%									
2003	163	53	42	11	11	10	14	13	3	1	4	0	1	0	0
	100%	32%	26%	7%	7%	6%	8%	8%	2%	1%	2%		1%		
2004	174	68	43	6	16	11	6	5	3	0	2	1	1	0	0
	* 93%	39%	25%	3%	9%	6%	3%	3%	2%		1%	<1%	<1%		
2005	195	139	15	11	7	4	3	2	3	1	0	0	0	1	1
	*95%	71%	8%	5%	4%	2%	2%	1%	2%	<1%				<1%	<1%
2006	164	98	26	8	8	5	3	4	3	4	2	0	1	1	1
	100%	60%	16%	5%	5%	3%	2%	2%	2%	2%	<1%		<1%	<1%	<1%

* Some plots were not collected due to weather.